

U. S. Serial No. 09/776,865
Filed: February 2, 2001
Response to Non-Final Office Action
Page 2 of 13

LISTING OF CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method of preventing a pathoangiogenic condition in a mammal consisting of: administering to said mammal an amount of one or more Group B β -hemolytic *Streptococci* ("GBS") toxin receptors or immunogenic fragments thereof effective to induce or maintain an immune response to at least one of the Group B β -hemolytic *Streptococci* toxin receptors,

whereby the development of said pathoangiogenic condition in the mammal is prevented,

wherein the pathoangiogenic condition comprises cancer,

and wherein the Group B β -hemolytic *Streptococci* toxin receptor comprises HP59 or SP55.

2-3. (Canceled)

4. (Previously Presented) The method of claim 1, wherein at least one of the Group B β -hemolytic *Streptococci* toxin receptors has substantial identity to SEQ ID NO: 2.

5. (Previously Presented) The method of Claim 4, wherein at least one of the Group B β -hemolytic *Streptococci* toxin receptors is identical to SEQ ID NO: 2, or is SEQ ID NO: 2 with at least one conservative amino acid substitution.

6. (Previously Presented) The method of claim 1, wherein at least one immunogenic fragment has substantial identity to a portion of SEQ ID NO: 2.

BEST AVAILABLE COPY

ATLLIB02 172443.1

U. S. Serial No. 09/776,865
Filed: February 2, 2001
Response to Non-Final Office Action
Page 3 of 13

7. (Previously Presented) The method of claim 6, wherein at least one immunogenic fragment has substantial identity to a peptide consisting of amino acid residues 8-28 of SEQ ID NO:2.
8. (Previously Presented) The method of claim 1, wherein at least one of the Group B β -hemolytic *Streptococci* toxin receptors has substantial identity to SEQ ID NO: 4.
9. (Previously Presented) The method of claim 8, wherein at least one other Group B β -hemolytic *Streptococci* toxin receptors has substantial identity to SEQ ID NO: 2.
10. (Previously Presented) The method of claim 8, wherein at least one other Group B β -hemolytic *Streptococci* toxin receptor is identical to SEQ ID NO: 4, or is SEQ ID NO: 4 with at least one conservative amino acid substitution.
11. (Previously Presented) The method of claim 1, wherein at least one immunogenic fragment has substantial identity to SEQ ID NO: 4.
12. (Previously Presented) The method of claim 11, wherein the at least one immunogenic fragment has substantial identity to a portion of SEQ ID NO: 4.
13. (Original) The method of claim 11, wherein at least one immunogenic fragment has substantial identity to a portion of SEQ ID NO: 2.
14. (Previously Presented) The method of claim 12, wherein at least one immunogenic fragment has substantial identity to a peptide consisting of amino acid residues 9-35 of SEQ ID NO: 4, a peptide consisting of amino acid residues 8-22 of SEQ ID NO: 4, or a peptide consisting of amino acid residues 71-84 of SEQ ID NO: 4.
15. (Previously Presented) The method of claim 1, wherein the normal tissue of the mammal does not contain the Group B β -hemolytic *Streptococci* toxin receptor.

ATLJTB02 172443.1

U. S. Serial No. 09/776,865
Filed: February 2, 2001
Response to Non-Final Office Action
Page 4 of 13

16. (Previously Presented) The method of claim 1, wherein the administering is via a method selected from the group consisting of oral ingestion, nasal inhalation, subcutaneous injection, intravenous injection, intramuscular injection, intraperitoneal injection and rectal injection.

17-28. (Canceled)

29. (Previously Presented) A composition comprising one or more Group B β -hemolytic *Streptococci* toxin receptors or immunogenic fragments thereof, wherein the GBS toxin receptor comprises HP59 and SP55.

30. (Previously Presented) The composition of claim 29, wherein one or more Group B β -hemolytic *Streptococci* toxin receptors or immunogenic fragments thereof are in an amount effective for protecting against or attenuating a pathoangiogenic condition in a mammal, wherein the pathoangiogenic condition comprises cancer.

31. (Previously Presented) The composition of Claim 30 further comprising a pharmaceutically acceptable excipient.

32. (Previously Presented) The composition of claim 30, wherein at least one of the Group B β -hemolytic *Streptococci* toxin receptors or fragments thereof is isolated.

33. (Original) The composition of claim 30, further comprising an adjuvant.

34. (Original) The composition of claim 33, wherein said adjuvant is selected from the group consisting of: a water in oil composition, Freund's adjuvant, QS21, IL-12 and interferon gamma.

U. S. Serial No. 09/776,865
Filed: February 2, 2001
Response to Non-Final Office Action
Page 5 of 13

35. (Original) The composition of claim 32, wherein one of the isolated Group B β -hemolytic *Streptococci* toxin receptors or fragments thereof is conjugated or linked to a protein carrier.

36. (Original) The composition of claim 35, wherein the protein carrier is a molecule selected from the group consisting of keyhole limpet hemocyanin (KLH), bovine serum albumin (BSA), ovalbumin, human serum albumin, human gamma globulin, chicken immunoglobulin G, bovine gamma globulin and tetanus toxoid.

37. (Previously Presented) The composition of claim 30, wherein at least one of the Group B β -hemolytic *Streptococci* toxin receptors or fragments thereof is glycosylated.

38. (Previously Presented) The composition of claim 30, wherein at least one of the Group B β -hemolytic *Streptococci* toxin receptors or fragments thereof is recombinant or synthetic.

39. (Canceled).

40. (Previously Presented) The composition of claim 30, wherein at least one other Group B β -hemolytic *Streptococci* toxin receptor has substantial identity to SEQ ID NO: 2.

41. (Previously Presented) The composition of claim 40, wherein at least one of the Group B β -hemolytic *Streptococci* toxin receptor is identical to SEQ ID NO: 2, or is SEQ ID NO: 2 with at least one conservative amino acid substitution.

42. (Previously Presented) The composition of claim 40, wherein at least one other Group B β -hemolytic *Streptococci* toxin receptor has substantial identity to SEQ ID NO: 4.

43. (Original) The composition of claim 30, wherein at least one immunogenic fragment has substantial identity to a portion of SEQ ID NO: 2.

U. S. Serial No. 09/776,865
Filed: February 2, 2001
Response to Non-Final Office Action
Page 6 of 13

44. (Previously Presented) The composition of claim 30, wherein at least one immunogenic fragment has substantial identity to a peptide consisting of amino acid residues 49-63 of SEQ ID NO: 2, a peptide consisting of amino acid residues 112-125 of SEQ ID NO: 2, a peptide consisting of amino acid residues 8-28 of SEQ ID NO: 2, or a peptide consisting of amino acid residues 49-76 of SEQ ID NO: 2.

45. (Previously Presented) The composition of claim 30, wherein at least one Group B β -hemolytic *Streptococci* toxin receptor has substantial identity to SEQ ID NO: 4.

46. (Previously Presented) The composition of claim 45, wherein at least one other Group B β -hemolytic *Streptococci* toxin receptor is identical to SEQ ID NO: 4, or is SEQ ID NO: 4 with at least one conservative amino acid substitution.

47. (Original) The composition of claim 30, wherein at least one immunogenic fragment has substantial identity to a portion of SEQ ID NO: 4.

48. (Previously Presented) The composition of claim 47, wherein at least one immunogenic fragment has substantial identity to a peptide consisting of amino acid residues 9-35 of SEQ ID NO: 4, a peptide consisting of amino acid residues 8-22 of SEQ ID NO: 4, or a peptide consisting of amino acid residues 71-84 of SEQ ID NO: 4.

49. (Withdrawn) The composition of claim 30, further comprising an effective amount of one or more immunocompatible antibodies that bind to a GBS toxin receptor.

50. (Withdrawn) A composition comprising: antibodies that bind to a GBS toxin receptor.

ATLJTB02 172443.1

U. S. Serial No. 09/776,865
Filed: February 2, 2001
Response to Non-Final Office Action
Page 7 of 13

51. (Withdrawn) The composition of claim 49 or 50, wherein each antibody is a monoclonal antibody.

52. (Withdrawn) The composition of claim 49 or 50, wherein each antibody is obtained from a polyclonal serum.

53. (Withdrawn) The composition of claim 49 or 50, wherein at least one of the antibodies further comprises a cytotoxic agent.

54. (Withdrawn) The composition of claim 30, further comprising T cells from the mammal that have been cultured with a GBS toxin receptor.

55. (Previously Presented) A method of producing a composition for treatment and/or prevention of pathoangiogenic conditions comprising:

providing at least one Group B β -hemolytic *Streptococci* toxin receptor or immunogenic fragment thereof, and

formulating the receptor or fragment in a pharmaceutically acceptable excipient

whereby said composition is produced

wherein the pathoangiogenic condition comprises cancer, and

wherein the Group B β -hemolytic *Streptococci* toxin receptor or immunogenic fragment thereof comprises HP59 or SP55.

56. (Original) The method of claim 55 further comprising providing an adjuvant.

57-58. (Canceled)

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.